ABSTRACT

The present invention provides efficient and effective quality of service for information that is time sensitive (e.g., real time data). An intermediate network communication system and method (e.g., a router) of

5   the present invention performs cut through switching to reduce latency problems for time sensitive information. In one embodiment of the present invention, communication packet header information is encoded with a time sensitive identifier that identifies the information as time sensitive. In one exemplary transfer control protocol/internet protocol TCP/IP

10 implementation of the present invention, time sensitive indication is provided in the link layer information. In one embodiment of the present invention, time sensitive information is dropped if the intermediate network device can not communicate the information within specified timing constraints. In one embodiment of the present invention time sensitive

15 information is cut through routed on a virtual channel and pre-empts non time sensitive information. In one embodiment a communication path probe is cut through routed via intermediate network devices to establish a communication path before other information is communicated from a originating source to a final destination. In one embodiment the present

20 invention leverages previously collected information to establish a communication path. In one embodiment the present invention, an intermediate network device establishes a second communication link if a first communication link is unavailable.